PSSA Open Ended Prep – Discount #3

Please read the given situation carefully. Then, answer each question that follows. If you are asked to EXPLAIN something, please do so using COMPLETE SENTENCES!

Situation #1:

Mrs. Harrison wants to go shopping for sweaters for the winter. He wants to buy 4 sweaters, and has looked at prices at two different stores.

All 80’s Department Store, which normally sells sweaters for $36.00, is having a 30% off sale on all sweaters.

Overruns ‘R’ Us Department Store, which normally sells sweaters for $34.50, has a “buy 2 get 1 free” deal going on right now.

Part A) How much will one sweater from the All 80’s Department Store cost?

\[
\begin{align*}
36.00 & \times 0.30 \\
10.80 & \quad \text{(OR)} \\
\hline
25.20 & \\
\end{align*}
\]

Part B) If Mrs. Harrison is going to buy 4 sweaters, which store should she buy them from? How much money will she save doing so? Show all work. EXPLAIN what you did and why.

Overruns ‘R’ Us

\[
\begin{align*}
34.50 & \quad \text{FREE} \\
+ 34.50 & \\
\hline
103.50 & \\
\end{align*}
\]

I multiplied the sale price from the All 80’s store by 4 to get that total cost.

I added the cost of 4 sweaters from Overruns ‘R’ Us (the third one would be FREE) to get that total.

Subtracting those totals will lead to savings.

Buy from All 80’s!

\[
\begin{align*}
103.50 & \quad \text{(total from Overruns)} \\
- 100.80 & \\
\hline
2.70 & \quad \text{savings}
\end{align*}
\]
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Situation #2:

Mr. Snoop goes to Best Buy to get some CDs. Best Buy is having a 10% off sale this week.

There is also a $5 clearance bin that has a “buy 4, get 1 free” deal...but these CDs do not get the 10% off.

\[
5 + 5 + 5 + \text{FREE} + 5 + 5 + 5 + \text{FREE} + 5 + 5 = 50
\]

Part A) Mr. Snoop purchases 2 CDs marked at $15.89 each, and another CD marked at $18.99. He then grabs 12 CDs from the clearance bin. After the discounts are applied, an 8% sales tax is added to his total. What is the final cost of his purchase? **Show all work. EXPLAIN** what you did and why.

\[
\begin{align*}
15.89 \\
15.89 \\
+18.99 \\
\hline
50.77 \\
50.77 \\
\times .10 \\
\hline
5.077 \\
\text{discount is } 5.08 \\
50.77 \\
-5.08 \\
\hline
45.69 \\
45.69 \\
+50 \\
\hline
95.69 \\
95.69 \\
\times .08 \\
\hline
7.6552 \\
\text{tax is } 7.66 \\
95.69 \\
+7.66 \\
\hline
103.35
\end{align*}
\]

I added the prices of the 3 CDs, and then multiplied by 10% to find the discount. I subtracted the discount from the subtotal to get the total. Then I added the cost of the 12 CDs from the clearance bin (every 5th one was FREE). I then added the totals for the regular items and the clearance items to get an overall subtotal. I multiplied that by 8% to find the tax. I added the tax to the subtotal to get the final cost!

Part B) At the same Best Buy store, you overhear Mr. Seidel saying to his wife, “After the 10% discount, this CD is only $7.65!” What is the original price of the CD Mr. Seidel is talking about?

\[
\begin{align*}
\text{New Price} &= \% \text{ (on) of original} \\
7.65 &= .9 \times W \\
\frac{7.65}{.9} &= \frac{.9}{.9} \\
8.50 &= W
\end{align*}
\]